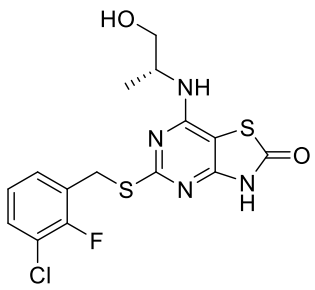
Product data sheet

MedKoo Cat#: 407412 Name: AZ10397767 CAS#: 333742-63-5 Chemical Formula: $C_{15}H_{14}ClFN_4O_2S_2$ Exact Mass: 400.0231 Molecular Weight: 400.8714	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
AZ10397767 is a potent CXCR2 antagonist (IC50 = 1 nM). AZ10397767 significantly reduced the numbers of infiltrating neutrophils into both in vitro and in vivo tumor models, which was associated with slower growing tumors. AZ10397767 increased 17-AAG-induced apoptosis and necrosis and decreased NF-kappaB activity/CXCL8 expression in 17-AAG-treated PC3 cells.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	40.09	100.01

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.49 mL	12.47 mL	24.95 mL
5 mM	0.50 mL	2.49 mL	4.99 mL
10 mM	0.25 mL	1.25 mL	2.49 mL
50 mM	0.05 mL	0.25 mL	0.50 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Wilson C, Maxwell PJ, Longley DB, Wilson RH, Johnston PG, Waugh DJ. Constitutive and treatment-induced CXCL8-signalling selectively modulates the efficacy of anti-metabolite therapeutics in metastatic prostate cancer. PLoS One. 2012;7(5):e36545. doi: 10.1371/journal.pone.0036545. Epub 2012 May 9. PMID: 22590561; PMCID: PMC3348872.
2. Tazzyman S, Barry ST, Ashton S, Wood P, Blakey D, Lewis CE, Murdoch C. Inhibition of neutrophil infiltration into A549 lung tumors in vitro and in vivo using a CXCR2-specific antagonist is associated with reduced tumor growth. Int J Cancer. 2011 Aug 15;129(4):847-58. doi: 10.1002/ijc.25987. Epub 2011 Apr 13. PMID: 21328342.

In vivo study

1. Tazzyman S, Barry ST, Ashton S, Wood P, Blakey D, Lewis CE, Murdoch C. Inhibition of neutrophil infiltration into A549 lung tumors in vitro and in vivo using a CXCR2-specific antagonist is associated with reduced tumor growth. Int J Cancer. 2011 Aug 15;129(4):847-58. doi: 10.1002/ijc.25987. Epub 2011 Apr 13. PMID: 21328342.

7. Bioactivity
Biological target:

Potent CXCR2 antagonist.

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In vitro activity

The addition of AZ10397767, used at a final concentration of 20 nM in order to exercise its selectivity for the CXCR2 receptor increased the potency of 5-FU-induced cytotoxicity in PC3 cells. Non-linear regression analysis of the data confirmed that the inhibition of CXCR2 signaling enhanced the potency of 5-FU by 3.8-fold, increasing the calculated IC_{30} value from 4.2 µM to 1.1 µM (n=4).

Reference: PLoS One. 2012; 7(5): e36545. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3348872/

In vivo activity

The mean tumor volume in AZ10397767-treated tumors started to diverge from control tumor volume by day 21 (11 days after commencement of antagonist dosing). At day 25 there was a significant difference ($p < 0.05$) in the volume of AZ10397767-treated compared to control tumors (Fig. 5a), this difference was more pronounced over the next several days and by day 31 AZ10397767-treated tumors were 36% smaller than their control counterparts ($p < 0.01$; Fig. 6a). Gr-1-positive neutrophils were abundant and distributed throughout A549 xenograft control mouse tumors when analyzed by immunohistochemistry (Fig. 5b). However, administration of AZ10397767 significantly ($p < 0.01$) reduced the number of tumor-infiltrating neutrophils compared to mice receiving vehicle control (Fig. 5b).

Reference: Int J Cancer. 2011 Aug 15;129(4):847-58. https://pubmed.ncbi.nlm.nih.gov/21328342/